[0028] (1) The main feature of the present invention resides in that material layers such as the touch control shield **10** are printed by printing on a flexible transparent plastic membrane **12**. The membrane **12** preferably consists of PE plastic material, and the thickness of the membrane **12** is preferably in the range of 0.3 mm-1.5 mm. Such thickness achieves better flexibility (elastic) effect. As shown in **FIG. 6**, the two ends of the entire touch control panel **100** may be bent to any angle of curve by force. The angle included by the two bent ends may be in the range of 0°-180°. Due to the progress in information technology, some electronic devices such as the personal digital processor (PDA) or electronic books or cell phones . . . etc. have display panels which are no longer restricted to being flat or planar. The display panel may be designed to be of arcuate or folded form. Referring to **FIG. 7**, the bottom face of the transparent plastic membrane **12** of the touch control panel **100** according to the present invention may be adhered evenly to the arcuate surface of the display panel **85** (LCD, LED) by means of a transparent adhesive **121**. Furthermore, after the display panel (LCD,LED) having arcuate surface is bonded with the touch control panel **100** of the present invention, a user is able to make point-contact to the touch control panel **100** using a finger or other conductive tool to obtain various functions such as writing, drawing, touch-selection, . . . etc.

[0029] (2) With reference to **FIGS. 1 and 2**, the material of the conductive film **20** may be indium tin oxide (ITO), which is printed by printing, considerably thinly, on the surface of the transparent plastic membrane **12** and renders the conductive film **20** to be transparent or translucent. Since the conductive film **20** is distributed over the transparent plastic membrane **12** in the form of a very thin layer, it can be easily scraped and damaged. Therefore, the upper surface of the conductive film **20** must be further printed with a thin protective layer **30** having greater hardness to prevent the conductive film **20** from being scraped and damaged. The protective layer **30** consists of a thin layer of transparent film having conductivity.

[0030] The lower isolation layer **40** is printed on the four peripheral sides of the protective layer **30** in the form of a frame.

[0031] The linearization pattern **60** is a printable oily ink layer formed by the mixture of highly conductive silver powder and carbon powder with a contact agent solution. Therefore; the linearization pattern **60** is essentially an oily ink layer (C-Slier) and this material is used to print framing lines on the periphery of protective layer **30**. In other words, uniform resistor framing lines are printed on the outer periphery of the protective layer **30**. The silver printing **50** has a plurality of silver pasty line strips which are directly printed by printing on the surface of the four peripheral edges of the lower isolation layer **40**, wherein the silver printing **50** is preferably distributed by four silver lines, the inner connecting ends **51**,**52**,**53**,**54** of the four silver lines being connected to the connecting ends **80***a* of the tail **80**, respectively, while the outer connecting ends of the tail **80** is connected to the controller (not shown).

[0032] The upper isolation layer **70** is printed by printing on the linearization pattern **60** and silver printing **50** and isolates the linearization pattern **60** from the silver printing **50**. A current-type touch control shield **10** is formed, which is printed on the flexible transparent plastic membrane **12**.

[0033] The controller (not shown) will output four equal voltages to the four corners of the linearization pattern **60** of such touch control shield, and will measure any time the variation of current on the surface of the touch control shield **10**. With reference to **FIG. 4**, when a user touches the surface of the touch control panel **100** with his finger or using a conductive tool, a capacitance effect will be generated. That is, from the equal voltages Va outputted from the controller to the four ends of the linearization pattern **60**, these four equal voltages can measure the current reference value Ia of the current variation of the capacitance effect to confirm the position of the contacted point. If the contacted point position is different, the reference value Ia of the current variation current will be different. The current variation reference value measured by the controller will be read and processed by the controller (CPU) in the main computer, and the variation signal of the read and processed current reference value Ia is manifested by the plastic transparent membrane **12** through the display panel **85**. Thus, the user can directly write, draw or touch-select various functions (such as the switching of the functional windows) on the touch control shield of the transparent membrane **12**.

[0034] (3) With reference to **FIGS. 8 and 9**, an alternative embodiment in which the touch control panel **100** of the present invention is mounted in a folded-type electronic device **90** is shown. A piece of plastic transparent membrane **12** is printed simultaneously with two independent touch control shields **10**,**10**'. The electronic device **90** has two independent display panels **85**,**85**' therein, and the back face of a piece of transparent membrane **12** is evenly attached to the display panels **85**,**85**' by means of the transparent adhesive **121**, and allows the two independent touch control shields **10**,**10**' to be bonded onto the display panels **85**,**85**', respectively, Thereby, when the electronic device **90** is folded, the touch control panel **100** may flexibly bend substantially to an angle of 180° without any generation of a fold mark or crease. Furthermore, when the device **90** is unfolded to open, the touch control panel **100** rapidly returns to its original (flat) shape.

[0035] With its elastic bending and restoration from deformation characteristics, the flexible, current-type touch control panel **100** of the present invention indeed can be implemented on display panels **85**,**85**' having a curved face, as well on folded-type electronic device **90**. The features indeed can achieve the intended objects and effects.

[0036] While the present invention has been described in connection with what is considered the most practical and preferred embodiment, it is understood that this invention is not limited to the disclosed embodiment but is intended to cover various arrangements included within the spirit and scope of the broadest interpretation so as to encompass all such modifications and equivalent arrangements.

1. A flexible, current-type touch control panel, comprising a current-type touch control shield consisting of a plurality of material layers and being printed on a flexible, transparent